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DATE: Monday, March 26, 2007

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☐	L33	L31 and (streptococcus)adj(bovis)same(s)adj(bovis)	1
☐	L32	L31 and lactobacillus	1
☐	L31	L30 and (egg)adj(antibod?)	12
☐	L30	424/130.1,165.1,169.1,435/71.1,253.4,252.9,276,530/389.5.ccls.	2948
☐	L29	(mitteness)adj(bradley)adj(m)	2
☐	L28	L26 and (egg)adj(antibod?)	9
☐	L27	L26 and (rumen)adj(acidosis)	1
☐	L26	L23 and (lactobacillus)ajd(spp)	30086
☐	L25	L23 and (lactic)adj(acid)adj(producing)adj(bacteria)	0
☐	L24	L23 and (streptococcus)adj(bovis)	1
☐	L23	(nash)adj(peter)	21
☐	L22	L21 and (rumen)adj(acidosis)	1
☐	L21	(microbial)adj(adherence)adj(inhibitor)	13
☐	L20	L18 and (lactobacillus)	1
☐	L19	L18 and (streptococcus)adj(bovis)	1
☐	L18	L16 and (IgY)	7
☐	L17	L16 and (egg)adj(content)	5
☐	L16	(feed)adj(carrier)	1939
☐	L15	L14 and (rumen)adj(acidosis)	0
☐	L14	L13 and aerobic	25
☐	L13	L11 and (brain)adj(heart)adj(infusion)	25
☐	L12	L11 and (egg)adj(antibod?)	0
☐	L11	L10 and (stimulate)same(adhesion)	57
☐	L10	(lactobacillus)adj(spp)	459
☐	L9	L8 and (egg)adj(antibody)	0
☐	L8	L7 and (stimulate)same(adhesion)	12
☐	L7	(streptococcus)adj(bovis)	649
☐	L6	L4 and (streptococcus)adj(bovis)	6
☐	L5	L4 and (lactobacillus)adj(spp)	1
☐	L4	(egg)adj(antibod?)	121
☐	L3	L1 and (lactobacillus)adj(spp)	0

☐	L2	L1 and (streptococcus)adj(bovis)	0
☐	L1	(egg)adj(antibod?)same(IgY)	13

END OF SEARCH HISTORY

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FILE 'SCISEARCH' ENTERED AT 09:12:49 ON 26 MAR 2007

FILE 'CAPLUS' ENTERED AT 09:12:49 ON 26 MAR 2007

=> s lactobacillus
L1 89365 LACTOBACILLUS

=> s l1 and stimulate
L2 959 L1 AND STIMULATE

=> s l2 and adhesion
L3 37 L2 AND ADHESION

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PROCESSING COMPLETED FOR L3
L4 21 DUP REMOVE L3 (16 DUPLICATES REMOVED)

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L4 ANSWER 1 OF 21 MEDLINE on STN DUPLICATE 1
2006746907. PubMed ID: 17027112. A probiotic strain of Lactobacillus plantarum stimulates lymphocyte responses in immunologically intact and immunocompromised mice. Bujalance C; Moreno E; Jimenez-Valera M; Ruiz-Bravo A. (Department of Microbiology, Faculty of Pharmacy, University of Granada, Granada 18071, Spain.) International journal of food microbiology, (2007 Jan 1) Vol. 113, No. 1, pp. 28-34. Electronic Publication: 2006-10-05. Journal code: 8412849. ISSN: 0168-1605. Pub. country: Netherlands. Language: English.

AB Experimental evidences showing the immunomodulatory effects of probiotic microorganisms have been provided by studies on immunologically intact animals. Here we compared the immunomodulation capacity of a probiotic strain of Lactobacillus plantarum on intact and cyclophosphamide-treated BALB/c mice. Although this strain fulfilled the in vitro criteria for the selection of potentially probiotic bacteria (resistance to low pH and bile, adhesion to epithelial cells and antimicrobial activity), it was unable to establish a persistent colonization in the gastrointestinal tract after intragastric gavage. The administration of L. plantarum did not modify the cyclophosphamide-induced leukopenia, but partially restored the proliferation of spleen cells from cyclophosphamide-treated mice in response to lipopolysaccharide. Our

findings show that probiotic bacteria may exert immunomodulatory effects despite a limited colonization ability and may improve the immune function damaged by immunosuppressive agents.

L4 ANSWER 2 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
2006:1124927 Document No. 145:454134 Use of autoinducer-2 to modulate adhesion and stress tolerance in lactic acid bacteria used in probiotics. Buck, B. Logan; Azcarate-Peril, Andrea; Klaenhammer, Todd R.; Altermann, Eric (North Carolina State University, USA). PCT Int. Appl. WO 2006113475 A2 20061026, 140pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IS, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2006-US14143 20060414. PRIORITY: US 2005-671887P 20050415.

AB Methods and agents for improving the bioadhesion of probiotic bacteria to target substrates and improving their stress tolerance using autoinducer-2 protein. This may be achieved using bacteria expressing the gene for autoinducer-2 at a high level to increase bioadhesion and stress tolerance in the probiotic bacteria. Methods comprise exposing bacteria to adhesion adaptive conditions and thereby increasing the adhesion activity and/or stress tolerance of the bacteria. Further provided are autoinducer-2-related fusion proteins, antigenic peptides, antibodies, and vectors. Methods of screening compds. or environmental conditions which will stimulate the production of autoinducer-2 and/or produce an adhesion adaptive response are further provided, as are various methods of use for the bacteria having increased adhesion and/or stress tolerance. Gene expression profiling found that conditions promoting bioadhesion of Lactobacillus acidophilus induced expression of genes associated with autoinducer-2 biosynthesis and transport.

L4 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
2006:75760 Document No. 144:144263 Preparation of cell growth factor from Lactobacillus and its use. Aoki, Hiroshi; Toba, Takahiro (Showa Denko K. K., Japan). Jpn. Kokai Tokkyo Koho JP 2006022086 A 20060126, 13 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 2005-166620 20050607. PRIORITY: JP 2004-168458 20040607.

AB This invention provides a process of preparation of cell growth factor from Lactobacillus. The growth factor was able to bind of cell matrix and stimulate the aggregation and multiplication of animal cell line NB1RGB. The protein sequence of the microbial original growth factor was disclosed. The method provided in this invention can be used for mass production of the growth factor.

L4 ANSWER 4 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
2006:348139 Document No. 145:262622 In vitro anti-cancer activity of a novel microbial fermentation product on human carcinomas. Chui, Chung Hin; Gambari, Roberto; Lau, Fung Yi; Cheng, Gregory Yin Ming; Wong, Raymond Siu Ming; Kok, Stanton Hon Lung; Tang, Johnny Cheuk On; Teo, Ivy Tuang Ngo; Cheung, Filly; Cheng, Chor Hing; Ho, Kwok Ping; Chan, Albert Sun Chi; Wong, Alfonso (Anti-Cancer Research Center, Central Laboratory of the Institute of Molecular Technology for Drug Discovery and Synthesis, State Key Laboratory of Chinese Medicine and Molecular Pharmacology, Department of Applied Biology and Chemical Technology, The Hong Kong Polytechnic University, Peop. Rep. China). International Journal of Molecular Medicine, 17(4), 675-679 (English) 2006. CODEN: IJMMFG. ISSN: 1107-3756. Publisher: International Journal of Molecular Medicine.

AB The possible anti-proliferation and cell death induction potential of a novel microbial fermentation extract named as oncogen XP-180 (or simply as XP-180)

was tested on three human solid tumor carcinoma cell lines (non-small cell lung cancer A549, breast cancer MDA-MB231, liver adenocarcinoma SK-Hep1) and on the acute myelogenous leukemia KG1a cell line. Anti-proliferative activity of XP-180 was observed on all of these cancer cell lines with comparable efficiency and in a dose-dependent manner. Morphol. investigation further suggested that common features of apoptosis, including cell shrinkage and rounding, are present in XP-180 treated cells. Loss of adhesion properties of these solid tumor cell lines was observed upon XP-180 incubation. Anchorage-dependent clonogenicity assay on solid tumor cell lines and semi-solid methylcellulose colony formation assay on leukemia cell line further revealed that XP-180 strongly inhibited the regeneration potential of these cancer cells. Using KG1a as an exptl. model system, XP-180 was shown to stimulate the activity of caspase 3, 8 and 9 without significant change in caspase 6 activity. Furthermore, XP-180 readily induced collapse of mitochondrial membrane potential after 2 h of incubation. However, the use of the generic caspase specific inhibitor Z-VAD-FMK does not significantly reverse XP-180 mediated cell death. The results obtained suggest that XP-180-mediated cancer cell death could involve mitochondria and both caspase-dependent and -independent pathways. Therefore, XP-180 is an efficient anti-cancer regimen in vitro.

L4 ANSWER 5 OF 21 EMBASE DUPLICATE 2

2006008324 EMBASE GroEL of Lactobacillus johnsonii La1 (NCC 533) is cell surface associated: Potential role in interactions with the host and the gastric pathogen Helicobacter pylori. Bergonzelli G.E.; Granato D.; Pridmore R.D.; Marvin-Guy L.F.; Donnicola D.; Corthesy-Theulaz I.E.. G.E. Bergonzelli, Nestle Research Center, CH-1000 Lausanne 26, Switzerland. gabriela.bergonzelli@rdls.nestle.com. Infection and Immunity Vol. 74, No. 1, pp. 425-434 2006.

Refs: 57.

ISSN: 0019-9567. CODEN: INFIBR

Pub. Country: United States. Language: English. Summary Language: English.

Entered STN: 20060126. Last Updated on STN: 20060126

AB Heat shock proteins of the GroEL or Hsp60 class are highly conserved proteins essential to all living organisms. Even though GroEL proteins are classically considered intracellular proteins, they have been found at the surface of several mucosal pathogens and have been implicated in cell attachment and immune modulation. The purpose of the present study was to investigate the GroEL protein of a gram-positive probiotic bacterium, Lactobacillus johnsonii La1 (NCC 533). Its presence at the bacterial surface was demonstrated using a whole-cell enzyme-linked immunosorbent assay and could be detected in bacterial spent culture medium by immunoblotting. To assess binding of La1 GroEL to mucins and intestinal epithelial cells, the La1 GroEL protein was expressed in Escherichia coli. We report here that La1 recombinant GroEL (rGroEL) binds to mucins and epithelial cells and that this binding is pH dependent. Immunomodulation studies showed that La1 rGroEL stimulates interleukin-8 secretion in macrophages and HT29 cells in a CD14-dependent mechanism. This property is common to rGroEL from other gram-positive bacteria but not to the rGroEL of the gastric pathogen Helicobacter pylori. In addition, La1 rGroEL mediates the aggregation of H. pylori but not that of other intestinal pathogens. Our in vitro results suggest that GroEL proteins from La1 and other lactic acid bacteria might play a role in gastrointestinal homeostasis due to their ability to bind to components of the gastrointestinal mucosa and to aggregate H. pylori.

L4 ANSWER 6 OF 21 MEDLINE on STN

2004257534. PubMed ID: 15156050. Effect of lactobacilli administration in the vaginal tract of mice: evaluation of side effects and local immune response by local administration of selected strains. Vintini Elisa; Ocana Virginia; Elena Nader-Macias Maria. (Centro de

Referencia para Lactobacilos-CONICET, Tucuman, Argentina.) Methods in molecular biology (Clifton, N.J.), (2004) Vol. 268, pp. 401-10. Journal code: 9214969. ISSN: 1064-3745. Pub. country: United States. Language: English.

AB Lactobacilli are the predominant microorganisms in the vaginal tract of human and some homeothermic animals. They can maintain the ecological equilibrium of the tract by protecting against pathogenic microorganisms. In the last few years, there has been an increased tendency to use probiotic microorganisms to restore the ecological equilibrium and to protect against infections. This principle has been widely applied to the gastrointestinal tract. More recently, some other studies have reported the application of probiotics in different tracts, for example, the urogenital or respiratory tract.One of the objectives of our group is to design probiotic products for the urogenital tract. With this purpose, lactobacilli were isolated from the human vagina, and later some of them were selected for their probiotic characteristics (production of antagonistic substances or adhesion capability).The application of probiotic products in the vaginal tract has been approached empirically; some pharmaceuticals containing these microorganisms are available in the United States or Europe or are protected under the patent process or intellectual property rights. There are not enough studies in humans or animals to determine whether their administration can produce some type of collateral or adverse effect.Using Balb/c mice as the experimental model, the object of the present work was to study (1) whether intravaginal administration of human lactobacilli can produce colonization of the tract; (2) whether such administration produces some type of adverse or collateral effect; and (3) whether probiotics are able to stimulate the local immune system. Keeping in mind that hormones can affect the colonization or persistence ability of microorganisms, and with the purpose of having all animals at the same point in the sexual cycle, animals were cycled with estradiol 48 h before inoculation with lactobacilli. They were then inoculated im with hormones 48 h before beginning microorganism inoculations. Later they were intravaginally inoculated with the appropriate dose of each Lactobacillus strains. The animals were sacrificed on different days after inoculation to perform the following studies: 1. Microbiological assays: To determine the number of lactobacilli in the tract (in vaginal washes or in organ homogenates), by plating the samples in selective media containing antibiotic (to differentiate the resident flora from those administered experimentally).

L4 ANSWER 7 OF 21 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN DUPLICATE 3

2003103148 EMBASE Cell surface hydrophobicity is conveyed by S-layer proteins - A study in recombinant lactobacilli. Van Der Mei H.C.; Van De Belt-Gritter B.; Pouwels P.H.; Martinez B.; Busscher H.J.. H.C. Van Der Mei, Department of Biomedical Engineering, University of Groningen, Antonius Deusinglaan 1, 9713 AV Groningen, Netherlands. h.c.van.der.mei@med.rug.nl. Colloids and Surfaces B: Biointerfaces Vol. 28, No. 2-3, pp. 127-134 25 Apr 2003.
Refs: 38.
ISSN: 0927-7765. CODEN: CSBBEQ
S 0927-7765(02)00144-3. Pub. Country: Netherlands. Language: English. Summary Language: English.
Entered STN: 20030325. Last Updated on STN: 20030325

AB Cell surface hydrophobicity is one of the most important factors controlling adhesion of microorganisms to surfaces. In this paper, cell surface properties of lactobacilli and recombinant lactobacilli with and without a surface layer protein (SLP) associated with cell surface hydrophobicity were determined, including water contact angles, zeta potentials as a function of pH, the nitrogen contents of the cell surface and adhesion to hexadecane. Two strains possessing an S-layer (Lactobacillus acidophilus ATCC4356 and L. crispatus JCM5810) showed the highest water contact angles

(76 and 55°, respectively) and the highest N/C surface concentration ratios by X-ray photoelectron spectroscopy (0.172 and 0.160, respectively), indicative of the presence of S-layer proteins. L. casei 393*/CA5'A, with the SLP of L. crispatus JCM5810 anchored to its surface had higher water contact angles (62°) than its parent strain (32°), but no higher amount of cell surface nitrogen. However, anchoring of the SLP did stimulate its adhesion to hexadecane. LiCl treatment, removing S-layer and other non-covalently linked surface proteins, increased water contact angles and N/C ratios for L. crispatus JCM5810 and L. casei 393*/CA5'A, while L. acidophilus ATCC4356 showed a decrease in the N/C ratio like for L. gasseri LMG9203, that lacks an SLP. The isoelectric point of all but one Lactobacillus strain varied between 3.2 and 4.6, whereas strain L. crispatus JCM5810 was positively charged over the entire pH range. A hierarchical cluster analysis, using all cell surface hydrophobicity associated properties as input, yielded one cluster for strains possessing SLP, well separated from the other strains, including strains secreting SLP. It is concluded that SLP conveys hydrophobicity to the Lactobacillus cell surface and enhances its adhesion to hexadecane through hydrophobic interactions.

L4 ANSWER 8 OF 21 EMBASE

2003360010 EMBASE The influence of probiotics on bacterial translocation.

Metaxas G.; Kotzampassi K.; Paramythiotis D.; Zatagias A.; Eleftheriadis E.. K. Kotzampassi, 45 Agiou Dimitriou street, GR-546 32 Thessaloniki, Greece. elemakis@med.auth.gr. Archives of Hellenic Medicine Vol. 19, No. 6, pp. 652-659 2002.
Refs: 39.
ISSN: 1105-3992. CODEN: AEIAF7
Pub. Country: Greece. Language: Greek. Summary Language: English; Greek.
Entered STN: 20030925. Last Updated on STN: 20030925

AB OBJECTIVE: Probiotics are non-pathogenic microorganisms which, upon ingestion, exert a beneficial effect by maintaining the intestinal microfloral balance and the integrity of the host. They modify the microflora ecology of the gut, prevent adhesion of pathogenic bacteria, enhance the production of antimicrobial substances and stimulate the host immune defense. Since commensal flora and mucosal barrier comprise the principal structures responsible for bacterial translocation, this study was designed to investigate whether Lactobacillus reuteri would be effective in reducing bacterial translocation in Zymosan-induced non-septic peritonitis in the rat, by means of increasing enteric mucosal microcirculation and adherent mucus gel thickness. METHOD: Eighty male Wistar rats received either L. reuteri (10(7) CFU/day) or placebo for 5 days in drinking water. On day 5, half the rats of each group were subjected to intraperitoneal (IP) injection of Zymosan (500 mg/kg body weight) for induction of non-septic peritonitis, while the remaining received IP normal saline. Enteric mucosal microcirculation and adherent mucus gel thickness were assessed 18 hours later and the mesenteric lymph nodes were processed under aseptic conditions for evaluation of bacterial translocation. RESULTS: Enteric mucosal microcirculation and adherent mucus gel thickness exhibited a significant reduction in the Zymosan-induced peritonitis groups of rats, whether pretreated or not by L. reuteri. However, the reduction was statistically not so prominent in the probiotics-pretreated rats and this group of rats exhibited a statistically significantly less amount of translocated bacteria in relation to the placebo-treated Zymosan group. CONCLUSIONS: In this Zymosan-induced peritonitis model, L. reuteri pretreatment seems to enhance enteric mucosal barrier strength by means of increasing enteric mucosal microcirculation and adherent mucus gel thickness and thus reducing bacterial translocation.

L4 ANSWER 9 OF 21 EMBASE

2003025670 EMBASE Probiotics up-regulate MUC-2 mucin gene expression in a Caco-2 cell-culture model. Mattar A.F.; Teitelbaum D.H.; Drongowski R.A.; Yongyi F.; Harmon C.M.; Coran A.G.. D.H. Teitelbaum, Department of Surgery, Univ. of Michigan Medical School, C. S. Mott Children's Hospital, Ann Arbor, MI 48109, United States. dttlbm@umich.edu. Pediatric Surgery International Vol. 18, No. 7, pp. 586-590 2002.
Refs: 24.
ISSN: 0179-0358. CODEN: PSUIED
Pub. Country: Germany. Language: English. Summary Language: English.
Entered STN: 20030130. Last Updated on STN: 20030130

AB Enteral probiotics such as Lactobacillus casei GG (LGG) have been used in the treatment of a variety of intestinal disorders in infants and children, including diarrhea, malabsorption, and Clostridium difficile colitis. Previous studies have identified the gene locus for mucin (MUC-2) and its expression in Caco-2 cells. Others have demonstrated that mucin, located on the surface of the intestinal epithelium, inhibits bacterial translocation (BT). We previously demonstrated that both mucin and the probiotic bacterium LGG have an inhibitory effect on BT in both an in-vitro Caco-2 cell model and a neonatal rabbit model. We hypothesized that the decline in BT by LGG is mediated by up-regulation of epithelial MUC-2. Human enterocyte Caco-2 cells were grown to confluence and incubated at 37 °C with either medium (control group) or 10(4) or 10(8) LGG for 180 min. Nonadherent LGG was washed away. Caco-2 cells were then lysed, purified, and quantified for MUC-2 protein and mRNA. The addition of LGG to the enterocyte monolayer surface resulted in significantly ($P < 0.05$) increased MUC-2 expression compared to the untreated monolayers. Protein densities for MUC-2 significantly ($P < 0.05$) increased with LGG. Density (expressed as ratio to control group) was 8.6 ± 1.3 in the low-dose group (10(4) LGG) and 15.6 ± 2.3 in the high-dose group (108 LGG). LGG may thus bind to specific receptor sites on the enterocyte and stimulate the up-regulation of MUC-2, resulting in increased inhibition of BT.

L4 ANSWER 10 OF 21 MEDLINE on STN DUPLICATE 4
2002319370. PubMed ID: 12061632. Adhesion of lactic acid bacteria to caco-2 cells and their effect on cytokine secretion. Morita Hirotsugu; He Fang; Fuse Tetsuo; Ouwehand Arthur C; Hashimoto Hideo; Hosoda Masataka; Mizumachi Koko; Kurisaki Jun-ichi. (Technical Research Laboratory, Takanashi Milk Products Co., Ltd., Yokohama, Kanagawa, Japan.) Microbiology and immunology, (2002) Vol. 46, No. 4, pp. 293-7. Journal code: 7703966. ISSN: 0385-5600. Pub. country: Japan. Language: English.

AB Cytokines secreted by human enterocytes play a critical role in mucosal and systemic immunity. Intestinal microorganisms can influence this secretion. In the present study, 30 strains of lactic acid bacteria were characterized for their adhesion to Caco-2 cells and their potential to stimulate proinflammatory cytokine secretion by this cell line. The bacteria adhered in a strain-dependent manner to Caco-2 cells. Contact with lactobacilli did not result in the production of IL-6 or IL-8. A slight IL-6 and IL-8 production by a Caco-2 cell was detected after exposure to 8 of the tested Bifidobacterium strains. No correlation was found between adhesion and cytokine induction among the bacteria tested. This indicates that lactic acid bacteria, even those with strong adhesive properties, are not very likely to trigger an inflammatory response in human enterocytes.

L4 ANSWER 11 OF 21 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN
2002:545454 The Genuine Article (R) Number: 567DG. Oligosaccharides in infant formula. Vandenplas Y (Reprint). Free Univ Brussels, Acad Childrens Hosp, Laarbeeklaan 101, B-1090 Brussels, Belgium (Reprint); Free Univ Brussels, Acad Childrens Hosp, B-1090 Brussels, Belgium. BRITISH JOURNAL OF NUTRITION (MAY 2002) Vol. 87, Supp. [2], pp. S293-S296. ISSN: 0007-1145. Publisher: C A B I PUBLISHING, C/O PUBLISHING DIVISION, WALLINGFORD OX10 8DE, OXON, ENGLAND. Language: English.
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Breast-feeding is the golden standard for infant feeding. However, the majority of a few week old infants are fed with a second choice infant feeding, cow's milk based formula. Amongst the multiple differences between human and cow's milk regards the development of the gastro-intestinal flora: the flora of the breast-fed infant being richer in bifidobacteria and lactobacilli. Both species are known to be potentially beneficial for the health of the host. The absence of oligosaccharides, the third largest component in human milk, in cow's milk is likely to account for the differences in colonic flora. The oligosaccharide content and concentration in breast milk is - just as for the other macronutrients - a dynamic process, making it impossible for industry to mimic nature. However, if the composition cannot be mimicked, the effect and function can be imitated. The addition of two oligosaccharides, galacto-oligosaccharides and inulin, to cow's milk based infant formula has been shown to have a bifidogenic effect, and to stimulate the growth of bifidi and lactobacilli. In conclusion, the addition of oligosaccharides to cow's milk based infant formula brings this alternative, second choice infant feeding one step closer to the golden standard of human milk. But, prolonged breast-feeding should still be promoted with maximum effort.

L4 ANSWER 12 OF 21 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

2002:696392 The Genuine Article (R) Number: 584LM. Lactic acid bacteria, probiotics and immune system. Herich R (Reprint); Levkut M. Univ Vet Med, Dept Pathol, Komenskeho 73, Kosice 04001, Slovakia (Reprint); Univ Vet Med, Dept Pathol, Kosice 04001, Slovakia. VETERINARNI MEDICINA (JUN 2002) Vol. 47, No. 6, pp. 169-180. ISSN: 0375-8427. Publisher: INST AGRICULTURAL FOOD INFORMATION, SLEZSKA 7, PRAGUE 120 56, CZECH REPUBLIC. Language: English.

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Mucous membranes of the body are in direct contact with the outside environment and they are colonised by a large number of different bacteria. Through mucous membranes, the organism is in permanent contact with different antigens. Mucous surfaces are protected by many defence mechanisms that ensure a permanent and effective protection. They include the production of secretory IgA, the production of mucus, cytoprotective peptides, defensins etc. Indigenous microflora. markedly affects the structure of the host mucous, its function, and the development of the whole immune system. Protective microflora prevents pathogens from adhering by competition for substrates and places of adhesion, and they simultaneously produce antibacterial substances and stimulate the production of specific antibodies and mucus. The early colonisation of the gut with living micro-organisms is important for the development of the gut protection barrier. The number of immune and epithelial cells increases. Probiotic micro-organisms including lactic acid bacteria (LAB) positively influence the composition of the gut microflora; they stimulate the production of secretory IgA; they affect the targeted transportation of the luminal antigens to Peyer's patches and they increase the production of IFN-gamma. LAB stimulate the activity of non-specific and specific immune cells. These properties of the LAB depend on the particular species or strain of bacteria. These singularities are probably determined by differences in the cell wall composition. LAB belong to a group of beneficially acting bacteria and they are able to eliminate damage to the gut microenvironment; they stimulate local and systemic immune responses and they maintain the integrity of the gut wall.

L4 ANSWER 13 OF 21 MEDLINE on STN

2002644598. PubMed ID: 12402663. [Probiotics: history, definition, requirements and possible therapeutic applications]. I probiotici: storia, definizione, requisiti e possibili applicazioni terapeutiche. Montalto Massimo; Arancio Fabiola; Izzi Donatello; Cuoco Lucio; Curigliano Valentina; Manna Raffaele; Gasbarrini Giovanni. (Istituto di Medicina Interna, Universita Cattolica del Sacro Cuore, Policlinico A. Gemelli di

Roma.. mmontalto@rm.unicatt.it) . Annali italiani di medicina interna : organo ufficiale della Societa italiana di medicina interna, (2002 Jul-Sep) Vol. 17, No. 3, pp. 157-65. Ref: 79. Journal code: 8806705. ISSN: 0393-9340. Pub. country: Italy. Language: Italian.

AB The ingestion of probiotics is associated with various beneficial effects on human health and modifies the physiological homeostasis of the intestinal flora. Probiotics are microorganisms with some particular characteristics: human origin, safety in human use, bile and acid resistance, survival in the intestine, at least temporary colonization of the human gut, adhesion to the mucosa and bacteriocine production. Thanks to these characteristics, probiotics block the invasion of human intestinal cells by the enteroinvasive bacteria. Furthermore, they should be able to stimulate and modulate the intestinal immune response, and to protect and stabilize the mucosal barrier. Finally, the efficacy of probiotics should be evident and documented with valid studies. All their properties should be maintained during processing and storage. Probiotics are usually used to protect the host from pathogens. With regard to this, they are useful in the prevention of antibiotic and traveler's diarrhea and they may play a role in the management of gastric Helicobacter pylori infection. Furthermore, their efficacy in the treatment of infectious diarrhea, in inflammatory bowel diseases, in pouchitis and in food allergy has been shown. Probiotics can improve the symptoms of irritable bowel syndrome and of lactose malabsorption. Finally, it has been suggested that such microorganisms may play a role in the prevention of carcinogenesis and of tumor growth.

L4 ANSWER 14 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN

2001:449805 Document No. 135:45276 Galactomannan Oligosaccharide and procedure for their production as well as their use. Klingeberg, Michael; Kunz, Markwart; Ludwig, Eva; Munir, Mohammad; Rittig, Frank; Vogel, Manfred (Suedzucker Aktiengesellschaft Mannheim/Ochsenfurt, Germany). Ger. Offen. DE 19961182 A1 20010621, 12 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1999-19961182 19991218.

AB A process is provided for the manufacture of galactomannan derived oligosaccharides which can hinder infectious diseases, colon cancer, osteoporosis and stimulate the immune system. Thus, Bacillus subtilis cells immobilized in calcium alginate were employed to hydrolyze guar gum forming oligosaccharides with a d.p. less than 15 residues preferably between 2 and 7 residues. The resulting oligosaccharides were partially purified by ion exchange chromatog.

L4 ANSWER 15 OF 21 MEDLINE on STN

2001148339. PubMed ID: 11157348. Probiotics: determinants of survival and growth in the gut. Bezkorovainy A. (Department of Biochemistry, Rush Medical College, Chicago 60612, USA.) The American journal of clinical nutrition, (2001 Feb) Vol. 73, No. 2 Suppl, pp. 399S-405S. Ref: 82. Journal code: 0376027. ISSN: 0002-9165. Pub. country: United States. Language: English.

AB Bifidobacteria and lactobacilli are purportedly beneficial to human health and are called probiotics. Their survival during passage through the human gut, when administered in fermented milk products, has been investigated intensely in recent years. Well-controlled, small-scale studies on diarrhea in both adults and infants have shown that probiotics are beneficial and that they survive in sufficient numbers to affect gut microbial metabolism. Survival rates have been estimated at 20-40% for selected strains, the main obstacles to survival being gastric acidity and the action of bile salts. Although it is believed that the maximum probiotic effect can be achieved if the organisms adhere to intestinal mucosal cells, there is no evidence that exogenously administered probiotics do adhere to the mucosal cells. Instead, they seem to pass into the feces without having adhered or multiplied. Thus, to obtain a continuous exogenous probiotic effect, the probiotic culture must be ingested continually. Certain exogenously administered substances enhance the action of both exogenous and endogenous probiotics. Human milk

contains many substances that stimulate the growth of bifidobacteria in vitro and also in the small intestine of infants; however, it is unlikely that they function in the colon. However, lactulose and certain fructose-containing compounds, called prebiotics, are not digested in the small intestine but pass into the cecum unchanged, where they are selectively utilized by probiotics. Beneficial effects may thus accrue from exogenously administered probiotics, often administered with prebiotics, or by endogenous bifidobacteria and lactobacilli , whose metabolic activity and growth may also be enhanced by the administration of prebiotics.

L4 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN

2002:333352 Document No. 137:183948 Microorganisms exert bioactive and protective effects through the innate immune system. Morein, Bror; Hu, Ke-Fei (Department of Veterinary Microbiology, Swedish University of Agricultural Sciences, Uppsala, S-751 23, Swed.). Gut Environment of Pigs, [Papers presented at the Workshops "Feed Additives and Probiotics as an Alternative to Antibiotics as Growth Promoters" and "Gut Environment: Influence of Luminar Factors"], Uppsala, Sweden, June 18-19, 2000, Meeting Date 2000, 105-111. Editor(s): Piva, A.; Bach Knudsen, K. E.; Lindberg, J. E. Nottingham University Press: Nottingham, UK. ISBN: 1-897676-77-8 (English) 2001. CODEN: 69CNLT.

AB A review. The gut is entry for many pathogens but also the natural residence for many commensal bacteria. The protection against pathogens in the gut is in part provided by the microenvironment, in part by the innate immune system and a part of the protection is due to specific acquired immunity. To provoke and activate the innate immunity against an invader, e.g. a bacteria, the invader has to be recognized. The marker for recognition can be any mol. structure deviating from such structures of the host including prokaryotic peptides, lipids, DNA motifs e.g. CpG and above all carbohydrate structures. LPS is a well known bacterial mol. stimulating the innate immunity. The recognition of LPS leads to an effector phase with activation of the complement system, production of a number of chemokines and cytokines including IL-1, IL-6, IFN-γ, TNF-α, production of reactive oxygen intermediates (ROI) all indirectly or directly exerting antimicrobial effects. Several bacteria in the natural gut flora or non-pathogenic bacteria which can colonize the gut have been shown to have preventive or even therapeutic effects on pathogens. Most commonly used and studied are lactic acid bacteria (LAB) and they have been shown to stimulate the innate immune system to produce cytokines and products mentioned above. Another mechanism so far unique for Lactobacillus plantarum is to use mannose specific adhesions thereby likely to compete against Gram-neg. pathogens. An interesting prospect is the use of probiotic in the management of food allergy supposingly by stimulation of local regulatory cytokines.

L4 ANSWER 17 OF 21 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

2000:134577 The Genuine Article (R) Number: 282MF. Interactions mediating bacterial translocation in the immature intestine. Duffy L C (Reprint). SUNY Coll Buffalo, Childrens Hosp Buffalo, Woman & Childrens Hlth Res Fdn, Buffalo, NY 14222 USA (Reprint). JOURNAL OF NUTRITION (FEB 2000) Vol. 130, No. 2, Supp. [S], pp. 432S-436S. ISSN: 0022-3166. Publisher: AMER INST NUTRITION, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814 USA. Language: English. *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*

AB Systemic disease caused by transmucosal passage of enterovirulent bacteria and toxins from the gut lumen into the mesenteric lymph nodes (MLN) is reviewed, with particular concern for bacterial interactions in the developing gut of premature newborns. Anaerobic bacteria are rarely observed to translocate to the MLN, Bifidobacterial strains have been tested for their abilities to adhere to enterocyte-like Caco-2 cells in culture. We have investigated the inhibitory effect of adherent human bifidobacterial strains against colonization by a number of diarrheagenic bacteria (Escherichia coil 0157; Salmonella typhimurium) and viruses

(murine and rhesus rotavirus), in various in vitro and in vivo models, The phagocytic cell (macrophage) may be a key factor in bacterial translocation (BT). Human breast milk contains abundant bioactive substances (immunologic, nutritional) that provide protective effects through inhibition of bacterial overgrowth and BT, New biotherapeutic therapies that stimulate beneficial anaerobic microflora (Lactobacillus, Bifidobacterium) are promising avenues of research to combat BT in disease treatment.

L4 ANSWER 18 OF 21 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

2000:142491 The Genuine Article (R) Number: 284TK. Probiotics and gastrointestinal health. Gorbach S L (Reprint). Tufts Univ, Sch Med, 136 Harrison Ave, Boston, MA 02111 USA (Reprint); Tufts Univ, Sch Med, Boston, MA 02111 USA. AMERICAN JOURNAL OF GASTROENTEROLOGY (JAN 2000) Vol. 95, No. 1, Supp. [S], pp. S2-S4. ISSN: 0002-9270. Publisher: ELSEVIER SCIENCE INC, 655 AVENUE OF THE AMERICAS, NEW YORK, NY 10010 USA. Language: English. *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*

AB Evidence for positive health benefits of Lactobacilli applies to only a few strains used for commercial applications. It is generally agreed that a probiotic must be capable of colonizing the intestinal tract to influence human health; this requirement disqualifies many of the strains currently used in fermented dairy products. Lactobacillus GG, a variant of L. casei sps rhamnosus, has been studied extensively in adults and children. When consumed as a dairy product or as a lyophilized powder, LGG colonizes the gastrointestinal tract for 1-3 days in most individuals and up to 7 days in about 30% of subjects. Traveler's diarrhea, antibiotic-associated diarrhea, and relapsing Clostridium difficile colitis are improved with LGG. In infantile diarrhea, the severity and duration of the attack is reduced. LGG-fermented milk lessens the intestinal permeability defects caused by exposure to cows milk or rotavirus infection. LGG has proven beneficial effects on intestinal immunity. It increases the numbers of IgA and other immunoglobulin-secreting cells in the intestinal mucosa. LGG stimulates local release of interferon. It facilitates antigen transport to underlying lymphoid cells, which serves to increase antigen uptake in Peyer's patches. LGG also acts as an immunoadjuvant for oral vaccines. In an animal model of colon cancer, LGG reduced the incidence of chemically induced tumors in the large bowel of rodents. Extensive safety testing has shown no pathogenic potential in humans or animals. Probiotic cultures of Lactobacilli have the potential to bring substantial health benefits to the consumer. The purported benefits for any probiotic must pass the highest standards of scientific scrutiny before the claims can be accepted.

L4 ANSWER 19 OF 21 MEDLINE on STN DUPLICATE 5

2000072163. PubMed ID: 10606147. Study of adhesion of Lactobacillus casei CRL 431 to ileal intestinal cells of mice. Morata de Ambrosini V I; Gonzalez S N; Oliver G. (Centro de Referencia para Lactobacilos, Tucuman, Argentina.) Journal of food protection, (1999 Dec) Vol. 62, No. 12, pp. 1430-4. Journal code: 7703944. ISSN: 0362-028X. Pub. country: United States. Language: English.

AB It is well known that the cell wall of Lactobacillus casei CRL 431, a strain present in probiotics, presents lectinlike surface molecules. Presence of these molecules stimulates the immune system. Given the role that lectins and lectinlike substances play in the adhesion phenomenon, it is probable that this is an initial stage in the immunostimulation produced by this bacterium. To confirm this, adhesion of this microorganism to exfoliated mouse ileal epithelial cells was studied in vitro. Other L. casei strains isolated from adult human intestines and one of dairy origin were also examined for their ability to adhere to ileal epithelial cells. Another strain, which was included in the present study, was Lactobacillus acidophilus CRL 730. L. casei strains isolated from humans showed good ability to adhere to ileal epithelial cells, whereas L. casei isolated from dairy

origin did not. Adhesion was only observed at 37 degrees C and at a pH between 6 and 7.5. The exposure time needed for highest adhesion was 30 min. Presence of lectinlike substances on the surface of L. casei CRL 431 is important to this adhesion phenomenon, since adherence capacity was lost after removal of these substances.

L4 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2007 ACS on STN
1997:482800 Document No. 127:204342 Colonization of congenitally immunodeficient mice with probiotic bacteria. Wagner, R. Doug; Warner, Thomas; Roberts, Lisa; Farmer, Jeffrey; Balish, Edward (Department of Medical Microbiology and Immunology, University of Wisconsin Medical School, Madison, WI, 53706-1532, USA). Infection and Immunity, 65(8), 3345-3351 (English) 1997. CODEN: INFIBR. ISSN: 0019-9567. Publisher: American Society for Microbiology.
AB The authors assessed the capacity of four probiotic bacteria (Lactobacillus acidophilus, Lactobacillus reuteri, Lactobacillus casei GG, and Bifidobacterium animalis) to colonize, infect, stimulate immune responses in, and affect the growth and survival of congenitally immunodeficient gnotobiotic beige-athymic (bg/bg-nu/nu) and beige-euthymic (bg/bg-nu/+) mice. The bacteria colonized and persisted, in pure culture, in the alimentary tracts of both mouse strains for the entire study period (12 wk). Although all adult and neonatal beige-euthymic mice survived probiotic colonization, some infant mortality occurred in beige-athymic pups born to mothers colonized with pure cultures of L. reuteri or L. casei GG. The probiotic bacteria manifested different capacities to adhere to epithelial surfaces, disseminate to internal organs, affect the body weight of adult mice and the growth of neonatal mice, and stimulate immune responses. Although the probiotic species were innocuous for adults, these results suggest that caution and further studies to assess the safety of probiotic bacteria for immunodeficient hosts, especially neonates, are required.

L4 ANSWER 21 OF 21 MEDLINE on STN DUPLICATE 6
96015270. PubMed ID: 7593855. Immune system stimulation by probiotics. Perdigon G; Alvarez S; Rachid M; Aguero G; Gobbato N. (Centro de Referencias para Lactobacilos (CERELA), Tucuman, Argentina.) Journal of dairy science, (1995 Jul) Vol. 78, No. 7, pp. 1597-606. Ref: 18. Journal code: 2985126R. ISSN: 0022-0302. Pub. country: United States. Language: English.
AB The immune system consists of organs and several cell types. Antigen interaction with these cells induces a cellular immune response mediated by activated cells and a humoral immune response mediated by antibodies. The cellular interactions are enhanced by adhesion molecules, and the activated cells release different cytokines. These complex cellular interactions induce a systemic immune response. If the antigen penetrates by the oral route, a secretory immune response is obtained, which is mediated by secretory IgA. The determination of the number of T or B cells, the quantitative or qualitative measure of the cytokines, antibody levels, or the study of cellular function such as phagocytic activity is used to evaluate the state of the immune system. The effects of lactic acid bacteria on the systemic immune response and on the secretory immune system are described. Potential health benefits of lactic acid bacteria include protection against enteric infections, use as an oral adjuvant, the immunopotentiator in malnutrition, and the prevention of chemically induced tumors. The results showed that Lactobacillus casei could prevent enteric infections and stimulate secretory IgA in malnourished animals, but could produce bacteria translocation. Yogurt could inhibit the growth of intestinal carcinoma through increased activity of IgA, T cells, and macrophages.

=> s l1 and culture medium
L5 3351 L1 AND CULTURE MEDIUM

=> s l5 and brain heart infusion
L6 16 L5 AND BRAIN HEART INFUSION

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L7 0 L6 AND THIOGLYCOLLATE MEDIA

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L8 12 DUP REMOVE L6 (4 DUPLICATES REMOVED)

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L8 ANSWER 1 OF 12 MEDLINE on STN DUPLICATE 1
2005504045. PubMed ID: 15915155. In vitro evaluation of probiotics microorganisms adhesion to an artificial caries model. Lima L M; Motisuki C; Spolidorio D Madalena Palomari; Santos-Pinto L. (Department of Pediatric Dentistry, Araraquara Dental School, University of Sao Paulo State, Rua Humaita, 1680, Avenida Mariangela Pucci Ananias, 305 Araraquara, Brazil.. lulima@yahoo.com) . European journal of clinical nutrition, (2005 Jul) Vol. 59, No. 7, pp. 884-6. Journal code: 8804070. ISSN: 0954-3007. Pub. country: England: United Kingdom. Language: English.
AB OBJECTIVE: This in vitro study compared the adhesion of two probiotics microorganisms (Lactobacillus casei Shirota and Lactobacillus acidophilus) to an artificial caries model. METHOD: In total, 30 bovine teeth were longitudinally sectioned, excluding the lingual half surface. The specimens were covered with nail varnish, except for an area of 3 by 5 mm in dentin, suspended in an artificial caries solution promoted by Streptococcus mutans, and incubated at 37 degrees C. After 14 days, the specimens were separated equally into two groups and transferred to a brain heart infusion culture media containing L. acidophilus (group A) and L. casei Shirota (group S), at 37 degrees C. After 48 h, the exposed area of dentin was washed with 1 ml of distilled water and the caries dentin was removed and dispersed in 1 ml of saline solution. The samples of distilled water and caries dentin were diluted and inoculated in Rogosa selective Lactobacillus agar. The results in CFU/ml were analysed by the Mann-Whitney test. RESULTS: There was no significant difference between Groups A and S for the lactobacilli count in samples of distilled water (P = 0.237). CONCLUSIONS: The amount of L. acidophilus in the artificially caries dentin was significantly superior compared to L. casei Shirota (P = 0.047), suggesting an inferior adhesion potential for this microorganism.

L8 ANSWER 2 OF 12 MEDLINE on STN
2004521715. PubMed ID: 15491465. Alkali-resistant bacteria in root canal systems. Nakajo K; Nakazawa F; Iwaku M; Hoshino E. (Division of Cariology, Department of Oral Health, Niigata University Graduate School of Medical and Dental Sciences, Niigata, Japan.) Oral microbiology and immunology, (2004 Dec) Vol. 19, No. 6, pp. 390-4. Journal code: 8707451. ISSN: 0902-0055. Pub. country: Denmark. Language: English.
AB The aim of this study was to isolate and identify alkali-resistant bacteria from the dentin of infected root canals. Bacteria from homogenized dentin powder made up from infected root canal walls from human teeth were cultured on buffer-enriched Brain Heart Infusion agar supplemented with 4% sheep blood (BHI-blood agar), adjusted to pH 7.0, 9.0 or 10.0. Incubation took place for 7 days at 37 degrees C in an anaerobic glove box. Bacterial strains selected according to colony and morphology were subcultured in buffer-enriched BHI broth adjusted to pH 9.0, 10.0 or 11.0 to confirm their growth as alkali-resistant bacteria. Polymerase chain reaction amplification using specific primer sets and 16S rDNA sequence analysis was performed for identification of alkali-resistant isolates. In the present study, 37 teeth extracted from 37 patients were used for preparation of the dentin powder samples. Bacteria were detected in 25 samples when standard BHI-blood agars (pH 7.0) were used. Of these, 29 strains from 15 samples

were alkali resistant, 25 strains growing at pH 9.0 and 4 at pH 10.0. The alkali-resistant strains included Enterococcus faecium (10 strains) and Enterococcus faecalis (2 strains), Enterobacter cancerogenus (1 strains), Fusobacterium nucleatum (1 strains), Klebsiella ornithinolytica (2 strains), Lactobacillus rhamnosus (2 strains), Streptococcus anginosus (2 strains), Streptococcus constellatus (3 strains), and Streptococcus mitis (2 strains). Three strains were also identified as bacteria of genus Firmicutes or Staphylococcus at the genus level. The present study showed that many bacterial species in infected root canal dentin were alkali-resistant at pH 9.0 and/or pH 10.0, and belonged mainly to the genus Enterococcus.

L8 ANSWER 3 OF 12 EMBASE

2003439097 EMBASE Methods used for the isolation, enumeration, characterisation and identification of Enterococcus spp.: 1. Media for isolation and enumeration. Domig K.J.; Mayer H.K.; Kneifel W.. W. Kneifel, Dept. of Dairy Res. and Bacteriology, Boku-Univ. Nat. Rsrc./Appl. Life S., Gregor Mendel Strasse 33, A-1180 Vienna, Austria. wolfgang.kneifel@boku.ac.at. International Journal of Food Microbiology Vol. 88, No. 2-3, pp. 147-164 1 Dec 2003.
Refs: 198.
ISSN: 0168-1605. CODEN: IJFMDD
Pub. Country: Netherlands. Language: English. Summary Language: English.
Entered STN: 20031120. Last Updated on STN: 20031120

AB Due to their significance in food, feed, environmental and clinical samples, the detection and enumeration of enterococci have become an important issue not only in daily routine but also in current research activities. Several media and protocols have been published for diverse purposes, but there is no single method, which universally meets all requirements. Depending on the nature of the accompanying microflora and its level, certain substrates and modifications thereof have to be used, taking into account various drawbacks and advantages. In addition to the historical applications (examination of water, different kinds of foods, intestinal and other clinical specimen), the detection of vancomycin-resistant enterococci (VRE) has become an important task, since VRE have found to be frequently involved in nosocomial infections. Moreover, contradictory methodological recommendations can be found in the literature. This paper will give a systematic survey of the different media and methods proposed during the last two decades. Emphasis is placed on compositional details and on specific applications of the media described.

L8 ANSWER 4 OF 12 CAPLUS

2003:611371 Document No. 139:347802 Partial characterization of bacteriocins produced by Bacillus cereus isolates from milk and milk products. Torkar, Karmen Godic; Matijasic, Bojana Bogovic (Zootechnical Department, Biotechnical Faculty, University of Ljubljana, Domzale, SI-1230, Slovenia). Food Technology and Biotechnology, 41(2), 121-129 (English) 2003. CODEN: FTBRFD. ISSN: 1330-9862. Publisher: University of Zagreb, Faculty of Food Technology and Biotechnology.

AB Thirty one (19.2 %) out of 161 Bacillus cereus isolates from raw milk and milk products were found to produce proteinaceous substances which inhibit the growth of other B. cereus isolates. The detection of antibacterial activity depended on medium and method used. Bactericidal activity was detected in 23 (14 %) or 19 (12 %) of the tested strains on the tryptic soya agar and brain-heart infusion with glucose, resp., while 11 (7 %) of the strains produced bactericidal substances on both media. Nineteen percent of isolates from raw milk and 20 % of isolates from milk products were found to produce bacteriocins. Four B. cereus isolates inhibited the growth of individual test strains belonging to B. licheniformis, B. subtilis, Enterococcus faecalis, Escherichia coli, Staphylococcus aureus, Lactobacillus helveticus and L. casei species. The bacteriocins of four B. cereus isolates were studied in more detail. The production and activity of these

substances were detected in stationary-phase of bacterial culture. Two of them were stable after heating at 60 °C, while only one was stable after heating at 75 °C for 15 min. All of them were active over a range of pH=3-10. The apparent mol. wts. of four bacteriocins detected by SDS-PAGE electrophoresis were in the range of 1 to 8 kDa.

L8 ANSWER 5 OF 12 MEDLINE on STN

2003068019. PubMed ID: 12577590. Inhibition of Listeria monocytogenes LMG10470 by plantaricin UG1 in vitro and in beef meat. Enan Gamal; Alalyan Saleh; Abdel-salam Hassan A; Debevere Johan. (Microbiology Section, Sciences Department, King Khalid Military Academy, Box 22140, Riyadh 11495, Kingdom of Saudi Arabia.) Die Nahrung, (2002 Dec) Vol. 46, No. 6, pp. 411-4. Journal code: 0142530. ISSN: 0027-769X. Pub. country: Germany: Germany, Federal Republic of. Language: English.

AB The inhibition of Listeria monocytogenes LMG 10470 occurred due to plantaricin UG1, but not to lactic acid produced by Lactobacillus plantarum UG1 or its negatie variant (BAC). Partially purified plantaricin UG1 had a higher antilisterial activity in vitro and in meat than Lactobacillus plantarum UG1 culture. Plantaricin UG1 activity was higher in brain heart infusion (BHI) broth than in minced meat. The inhibitory effect of plantaricin UG1 against L. monocytogenes LMG10470 was dependent on its concentration. The 22,880 AU/mL appeared to be an ideal meat preservative in this experiment.

L8 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2007 ACS on STN

2002:783766 Document No. 138:234688 Virulence response of a Salmonella typhimurium hilA:lacZY fusion strain to spent media from pure cultures of selected bacteria and poultry cecal mixed culture. Nutt, J. D.; Kubena, L. F.; Nisbet, D. J.; Ricke, S. C. (Texas A&M University, College Station, TX, 77843, USA). Journal of Food Safety, 22(3), 169-181 (English) 2002. CODEN: JFSADP. ISSN: 0149-6085. Publisher: Food & Nutrition Press, Inc..

AB Virulence gene expression in Salmonella is triggered by a variety of environmental factors including changes in the gastrointestinal environment of birds during different dietary regimes. The objective of this study was to determine if growth of specific microorganisms alters the environmental conditions sufficiently to signal Salmonella Typhimurium virulence response. Spent media was obtained from a Salmonella typhimurium hilkA:lacZY fusion strain, a poultry Salmonella typhimurium strain, Escherichia coli K12, and Lactobacillus casei. Spent media samples were collected after 2, 4, 8 and 24 h of growth in brain heart infusion broth (BHI) and M9 media. β-Galactosidase assays were performed on the samples to determine virulence expression. Virulence response to Salmonella spent media was 2-fold greater than Lactobacillus spent media at 4, 8 and 24 h growth ($P<0.05$). Virulence expression almost doubled when exposed to Salmonella typhimurium (NONA) spent media compared to mixed culture spent media at 4 h, and Salmonella typhimurium (NONA) was significantly higher than mixed culture spent media at 24 h ($P<0.05$). Based on these results, it appears that growth of similar bacterial species may alter the composition of rich media sufficiently to influence virulence.

L8 ANSWER 7 OF 12 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

2001:470720 The Genuine Article (R) Number: 437JJ. A comparative study of preservation and storage of Haemophilus influenzae. de Saab O C A; de Castillo M C (Reprint); Holgado A P R; de Nader O M. Univ Nacl Tucuman, Fac Bioquim Quim & Farm, Inst Microbiol Dr Luis C Verna, Ayacucho 491, RA-4000 San Miguel De Tucuman, Tucuman, Argentina (Reprint); Univ Nacl Tucuman, Fac Bioquim Quim & Farm, Inst Microbiol Dr Luis C Verna, RA-4000 San Miguel De Tucuman, Tucuman, Argentina. MEMORIAS DO INSTITUTO OSWALDO CRUZ (MAY 2001) Vol. 96, No. 4, pp. 583-586. ISSN: 0074-0276. Publisher: FUNDACO OSWALDO CRUZ, AV BRASIL 4365, 21045-900 RIO DE JANEIRO, RJ, BRAZIL. Language: English.

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The aim of this study was to compare the efficacy of conservation by

freezing the strains of Haemophilus influenzae at -20 degreesC and -70 degreesC.

Skim milk supplemented with glucose, yeast extract and glycerol allowed highest viability of H. influenzae both at -20 degreesC and -70 degreesC from the media analyzed. Trypticase soy broth and brain heart infusion broth supplemented with glycerol, allowed excellent recovery. Use of cotton swaps as supporting material, with or without addition of cryoprotective agents, did not modify H. influenzae viability after six months of storage. Concentration of the initial inoculum positively affected viability when stored at -20 degreesC. Initial concentration did not influence survival after storage at -70 degreesC. Thawing at room temperature should not exceed 3 h as to get highest survival percentage.

L8 ANSWER 8 OF 12 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

97299596 EMBASE Document No.: 1997299596. Antibacterial activity of selected fatty acids and essential oils against six meat spoilage organisms. Ouattara B.; Simard R.E.; Holley R.A.; Piette G.J.-P.; Begin A.. B. Ouattara, Agriculture and Agri-Food Canada, Food Research and Development Centre, 3600 Casavant Blvd. West, St. Hyacinthe, Que. J2S 8E3, Canada. International Journal of Food Microbiology Vol. 37, No. 2-3, pp. 155-162 1997.

Refs: 37.

ISSN: 0168-1605. CODEN: IJFMDD

S 0168-1605(97)00070-6. Pub. Country: Netherlands. Language: English. Summary Language: English.

Entered STN: 971016. Last Updated on STN: 971016

AB The antibacterial activity of selected fatty acids and essential oils was examined against two gram-negative (Pseudomonas fluorescens and Serratia liquefaciens), and four gram-positive (Brochothrix thermosphacta, Carnobacterium piscicola, Lactobacillus curvatus, and Lactobacillus sake) bacteria involved in meat spoilage. Various amounts of each preservative were added to brain heart infusion or MRS agars, and the minimum inhibitory concentration was determined for each organism. Essential oils were analysed by gas-liquid chromatography to determine the concentration of selected components commonly found in spices B. thermosphacta, P. fluorescens and S. liquefaciens were not affected by fatty acids, and generally overcame the inhibitory effect of essential oils after 24 h of exposure. Among the fatty acids, lauric and palmitoleic acids exhibited the greatest inhibitory effect with minimum inhibitory concentrations of 250 to 500 μg/ml, while myristic, palmitic, stearic and oleic acids were completely ineffective. For essential oils, clove, cinnamon, pimento, and rosemary were found to be the most active. The 1/100 dilution of those oils inhibited at least five of the six tested organisms. A relationship was found between the inhibitory effect of essential oils and the presence of eugenol and cinnamaldehyde.

L8 ANSWER 9 OF 12 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN DUPLICATE 2

1994:315374 The Genuine Article (R) Number: NM375. INHIBITION OF STAPHYLOCOCCUS-AUREUS IN BUFFER, CULTURE MEDIA AND FOODS BY LACIDIN-A, A BACTERIOCIN PRODUCED BY LACTOBACILLUS -ACIDOPHILUS OSU133. LIAO C C (Reprint); YOUSEF A E; CHISM G W; RICHTER E R. OHIO STATE UNIV, DEPT FOOD SCI & TECHNOL, 2121 FYFFE RD, COLUMBUS, OH 43210. JOURNAL OF FOOD SAFETY (MAY 1994) Vol. 14, No. 2, pp. 87-101. ISSN: 0149-6085. Publisher: FOOD NUTRITION PRESS INC, 6527 MAIN ST, P O BOX 374, TRUMBULL, CT 06611. Language: English.

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Thirty seven strains of lactobacilli and leuconostocs were screened for bacteriocin production. A bacteriocin-like substance (designated lacidin A) was detected in culture filtrate of Lactobacillus acidophilus OSU133. Lacidin A inhibited Enterococcus faecalis, L. acidophilus, Lactobacillus delbrueckii

subsp. lactis, and Staphylococcus aureus. The bacteriocinogenic nature of lacidin A was confirmed by eliminating the inhibitory effects of acid, hydrogen peroxide and phage and by loss of activity upon hydrolysis with proteolytic enzymes. The bacteriocin is relatively heat-stable and has considerable bactericidal action against S. aureus in phosphate buffer. Lacidin A also demonstrated bacteriostatic action against S. aureus in brain heart infusion and heat-treated milk and liquid whole egg.

L8 ANSWER 10 OF 12 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

1988:354184 Document No.: PREV198886049662; BA86:49662. EFFECT OF CULTURE MEDIA AND GROWTH PHASE ON THE MORPHOLOGY OF LACTOBACILLI AND ON THEIR ABILITY TO ADHERE TO EPITHELIAL CELLS. COOK R L [Reprint author]; HARRIS R J; REID G. UROL RES, TORONTO GEN HOSP, BELL WING G-631, 200 ELIZABETH ST, TORONTO, ONTARIO M5G 2C4, CANADA. Current Microbiology, (1988) Vol. 17, No. 3, pp. 159-166. CODEN: CUMIDD. ISSN: 0343-8651. Language: ENGLISH.

AB Previous studies have demonstrated that the ability of lactobacilli to attach to and colonize uroepithelial surfaces is an important characteristic that enhances interference against uropathogenic bacteria. This adherence capacity was found to vary amongst lactobacillus strains and with the type of growth medium used to culture the organisms. The present study was undertaken to examine further the effect of culture media and growth phase on lactobacillus adherence to uroepithelial cells in vitro. In addition, a freeze substitution technique was developed to examine the morphology of strains Lactobacillus casei ss rhamnosus RC-17, L. casei GR-1, and L. acidophilus T-13 in relation to growth conditions and adhesion. A growth curve was plotted for strain GR-1, and adherence was found to be lower for bacteria in early log phase (39 bacteria per uroepithelial cell) and highest in stationary phase (59 bacteria per uroepithelial cell). Strains RC-17 and GR-1 attached in high numbers to uroepithelial cells, whereas T-13 was poorly adherent. The latter formed a long, relatively dense, fibrous capsule after growth in brain heart infusion yeast extract agar, unlike strains GR-1 and RC-17, which formed a short, tightly bound, electron-dense capsule which surrounded the cells in a radial fashion. Growth of RC-17 in batch cultures of human urine, with and without addition of carbohydrates, resulted in formation of an irregular, fibrous extracellular matrix. These experiments illustrate that growth phase and culture conditions affect the extracellular structure of lactobacilli and also affect the adherence capacity of these bacteria. Structural changes mediated by availability of nutrients may partly explain why lactobacilli vary between species and between hosts in their colonization of the urogenital tract.

L8 ANSWER 11 OF 12 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

86015892 EMBASE Document No.: 1986015892. In vitro antagonism of Escherichia coli by piglet small intestinal bacteria isolated by selective enrichment in media containing sow colostrum, piglet feed or brain heart infusion. Aimutis W.R.; Kornegay E.T.; Eigel W.N.. Virginia Polytechnic Institute and State University, Blacksburg, VA 24061, United States. Journal of General and Applied Microbiology Vol. 31, No. 2, pp. 135-146 1985.
CODEN: JGAMA
Pub. Country: Japan. Language: English.
Entered STN: 911210. Last Updated on STN: 911210
DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L8 ANSWER 12 OF 12 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN

1978:233096 Document No.: PREV197866045593; BA66:45593. THE EFFECT OF GARLIC EXTRACT ON LACTIC-ACID BACTERIA LACTOBACILLUS-PLANTARUM IN

CULTURE MEDIA. KARAIOANNOGLOU P G [Reprint author]; MANTIS A J; PANETSOS A G. DEP FOOD HYG, FAC VET MED, ARISTOTELIAN UNIV, THESSALONIKI, GREECE. Lebensmittel-Wissenschaft and Technologie, (1977) Vol. 10, No. 3, pp. 148-150.
CODEN: LBWTAP. ISSN: 0023-6438. Language: ENGLISH.

AB The effect of garlic extract on L. plantarum in culture media was studied. Growth was observed in BHI [brain heart infusion] broth containing 5%, 2% and 1% garlic extract under favorable and adverse conditions of temperature and pH (30° C, pH = 6.6; 37° C, pH = 7.4), using different initial inocula. As a reference medium BHI broth without garlic extract was used. Growth or no growth was observed by measuring the OD [optical density] of the culture medium, and by plating in duplicated series in APT agar. Garlic extract concentrations higher than 1% were inhibitory for L. plantarum, while concentrations between 2% and 5% were definitely germicidal. Under favorable conditions garlic extract had a less inhibitory or germicidal effect upon L. plantarum. Large inocula (> 106 cells/ml), were able to overcome the inhibitory effects of garlic extract in concentrations of 1%.

=> s streptococcus bovis
L9 4259 STREPTOCOCCUS BOVIS

=> s l9 and stimulate adhesion
L10 0 L9 AND STIMULATE ADHESION

=> s l9 and adhesion
L11 32 L9 AND ADHESION

=> dup remove l11
PROCESSING COMPLETED FOR L11
L12 22 DUP REMOVE L11 (10 DUPLICATES REMOVED)

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L12 ANSWER 1 OF 22 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN

2006463720 EMBASE Profiling the humoral immune response in colon cancer patients: Diagnostic antigens from Streptococcus bovis
. Tjalsma H.; Scholler-Guinard M.; Lasonder E.; Ruers T.J.; Willems H.L.; Swinkels D.W.. H. Tjalsma, Department of Clinical Chemistry/441, Radboud University Nijmegen-Medical Centre, P.O. Box 9101, 6500 HB Nijmegen, Netherlands. h.tjalsma@akc.umcn.nl. International Journal of Cancer Vol. 119, No. 9, pp. 2127-2135 1 Nov 2006.
Refs: 31.
ISSN: 0020-7136. E-ISSN: 1097-0215. CODEN: IJCNAW
Pub. Country: United States. Language: English. Summary Language: English.
Entered STN: 20061010. Last Updated on STN: 20061010

AB The human bowel contains a large and dynamic bacterial population that is not only essential for intestinal health, but also critical for the development of diseases such as cancer. In this respect, the Gram-positive bacterium Streptococcus bovis has been associated with colon cancer for many years. To investigate the clinical importance of this association, an immunocapture mass spectrometry assay was developed that can generate infection-related protein profiles. The composition of these profiles is governed by the capture of specific antigens by serum antibodies from colon cancer patients. This assay showed that S. bovis antigen profiles could distinguish 11 out of 12 colon cancer patients from 8 control subjects, whereas antigen profiles derived from the gut bacterium Escherichia coli were not diagnostic for colon cancer. Moreover, S. bovis antigen profiles were also detected in polyp patients, indicating that infection with this bacterium does occur early during carcinogenesis. Highly accurate tandem mass spectrometry was used to identify one of the diagnostic antigens as a surface-exposed

heparin-binding protein, which might be involved in attachment of S. bovis to tumor cells. Together, these findings corroborate the hypothesis that colonic lesions provide a specific niche for S. bovis, resulting in tumor-associated "silent" infections. These infections, however, only become apparent in colon cancer patients with a compromised immune system (bacteremia) or coincidental cardiac valve lesions (endocarditis). This makes profiling of the humoral immune response against "silent" S. bovis infections a promising diagnostic tool for the early detection of human colon cancer, which is crucial for the effective treatment of this disease. .COPYRGT. 2006 Wiley-Liss, Inc.

L12 ANSWER 2 OF 22 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
2006:359573 Document No.: PREV200600352618. An epidemiological study of reproductive failure in dairy herds from Goiania. Original Title: Estudo epidemiologico de problemas reprodutivos em rebanhos bovinos na bacia leiteira de Goiania. Andrade, J. R. A.; Silva, N. [Reprint Author]; Silveira, W.; Teixeira, M. C. C.. PUC Goias, Dept Zootecn, Caixa Postal 567, BR-30123970 Belo Horizonte, MG, Brazil. nivaldovet@yahoo.com.br. Arquivo Brasileiro de Medicina Veterinaria e Zootecnia, (DEC 2005) Vol. 57, No. 6, pp. 720-725.
ISSN: 0102-0935. Language: Portuguese.
AB An epidemiological study was carried out on 2823 cows from 34 dairy herds from Goiania in the State of Goias-Brazil during 2001 to 2002. The pregnancy rate was 47.8%. In 1473 non-pregnant cows, causes of reproductive failure problems were sought. The most prevalent uterine infection was endometritis (17.0%). Uterine disorders such as partial hypoplasia of the genital system (0.04%), macerate fetus (0.01%), adhesion of ovaries (0.04%), stillbirth (0.04%), retained placenta (0.01%), cervix inflammation (0.6%) and abortion (0.88%) also were found. Uterine swabs were collected aseptically for microbiological culture. Gram positives cocci (41.3%) and Gram negatives rods (52.6%) were found, and Staphylococcus aureus and Escherichia coli were the most prevalent pathogens. Susceptibility patterns of microorganisms suggested the use of chloramphenicol, gentamicin and neomycin for antimicrobial therapy.

L12 ANSWER 3 OF 22 MEDLINE on STN
2006000446. PubMed ID: 16317389. Ability of the heparan sulfate proteoglycan syndecan-1 to participate in bacterial translocation across the intestinal epithelial barrier. Henry-Stanley Michelle J; Hess Donavon J; Erlandsen Stanley L; Wells Carol L. (Department of Laboratory Medicine and Pathology, University of Minnesota, Minneapolis, MN 55455-0374, USA.) Shock (Augusta, Ga.), (2005 Dec) Vol. 24, No. 6, pp. 571-6. Journal code: 9421564. ISSN: 1073-2322. Pub. country: United States. Language: English.
AB Although hundreds of microbial species reside in the human intestinal tract, comparatively few (e.g., Escherichia coli and other enterobacteria, Enterococcus faecalis, etc.) are typically associated with systemic infection in postsurgical, shock, and trauma patients. Syndecan-1 is the predominant cell surface heparan sulfate proteoglycan expressed on epithelia, and there is substantial evidence that heparan sulfate participates in interactions of a variety of frankly pathogenic microbes with mammalian cells. To investigate the role of syndecan-1 in interactions of enteric flora with intestinal epithelium, bacteria that might use the enterocyte as a portal of entry for systemic infection (including E. faecalis, E. coli, and other enterobacteria, and several species of staphylococci and streptococci) were studied for their abilities to interact with syndecan-1. Streptococcus bovis, S. agalactiae, S. pyogenes, Staphylococcus aureus, and S. epidermidis showed increased adherence to ARH-77 cells transfected to express syndecan-1. Heparin, a heparan sulfate analog, inhibited internalization of S. bovis, S. agalactiae, S. pyogenes, and S. aureus by HT-29 enterocytes (prominent syndecan-1 expression), but not Caco-2 enterocytes (relatively low syndecan-1 expression). Data from experiments with Chinese hamster ovary cells with altered glycosaminoglycan expression indicated that heparan sulfate and chondroitin sulfate (glycosaminoglycans on the syndecan-1 ectodomain) participated in bacterial interactions with

mammalian cells. Thus, although E. faecalis, E. coli, and other gram-negative enterobacteria did not appear to interact with syndecan-1, this heparan sulfate proteoglycan may mediate enterocyte interactions with some staphylococci and streptococci that are known to cause systemic infections in specific populations of high-risk, immunosuppressed, postsurgical, and trauma patients.

L12 ANSWER 4 OF 22 MEDLINE on STN

2004623161. PubMed ID: 15598414. Coaggregation profiles of the microflora from root surface caries lesions. Shen S; Samaranayake L P; Yip H-K. (Oral Bio-sciences, Faculty of Dentistry, The University of Hong Kong, Prince Philip Dental Hospital, 34 Hospital Road, Hong Kong SAR, China.) Archives of oral biology, (2005 Jan) Vol. 50, No. 1, pp. 23-32. Journal code: 0116711. ISSN: 0003-9969. Pub. country: England: United Kingdom. Language: English.

AB Bacterial coaggregation reactions between different species and the auto aggregation of the same species are associated with the initiation and development of dental plaque and biofilms. As no such data is available on isolates from root caries lesions, we evaluated, by a visual, semi-quantitative scoring system and a spectrophotometric, quantitative assay, the coaggregation of 22 different wild-type microbial species comprising ten bacterial genera and a single Candida spp. The quantitative coaggregation assay we used proved to be a more sensitive method than the semi-quantitative, visual evaluation as the results yielded the percent coaggregation. Fusobacterium nucleatum, Lactobacillus acidophilus, Streptococcus bovis II/2 and Gemella morbillorum were observed having higher degrees of autoaggregation than the other examined strains. Significant levels of inter-species coaggregation was seen between: (1) Actinomyces spp. and Veillonella spp.; (2) Actinomyces israelii and Peptostreptococcus prevotii; (3) Campylobacter gracilis and Actinomyces spp.; (4) Prevotella intermedia and nine different species; and (5) Fusobacterium nucleatum and six other species. The single Candida albicans isolate did not coaggregate to a significant extent with any of the 21 bacterial isolates studied. Scanning electron microscopy observation of the coaggregation interactions between bacterial pairs having strong coaggregation reactions revealed varying adhesive patterns. Our findings on coaggregation amongst these isolates imply existence of multiple interactions between the coaggregation-inducing bacterial species in root caries. In particular, Actinomyces spp., Veillonella spp., Prevotella spp. and Fusobacterium spp. appear to play a significant role in this context.

L12 ANSWER 5 OF 22 CAPLUS COPYRIGHT 2007 ACS on STN

2004:333891 Document No. 140:351652 Anal. chip comprising evanescent field measurement platform and microarray for detection of 16S-rRNA from clin. relevant bacteria in liquid samples. Schrenzel, Jacques; Francois, Patrice; Charbonnier, Yvan; Jacquet, Jean Gabriel; Utinger, Dominic; Kresbach, Gerhard M.; Abel, Andreas; Ehrat, Markus (Hopitaux Universitaires De Geneve, Switz.). PCT Int. Appl. WO 2004033720 A2 20040422, 82 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO 2003-EP10626 20030924. PRIORITY: EP 2002-22631 20021009.

AB The invention is related to an anal. chip for the simultaneous determination of one or more different bacteria in a liquid sample comprising - an evanescent field measurement platform, e.g. an optical waveguide, as a solid carrier and a plurality of immobilized specific recognition elements forming an array for the detection of bacterial 16S-rRNA without amplification of the polynucleotide sequences contained in the sample. The invention is also related to an anal. method based on the use of said anal. chip to detect

clin. relevant bacteria in biol. samples. Methods for immobilization of recognition elements (such as polynucleotides, peptides, antigens, etc.) on the chip are disclosed. The compns. of the layers of the optical waveguide are also disclosed.

L12 ANSWER 6 OF 22 CAPLUS COPYRIGHT 2007 ACS on STN
2004:182241 Document No. 140:198089 Immunogen adherence inhibitor directed to lactic acid producing organisms and method of making and using it. Nash, Peter; Mitteness, Bradley M. (USA). U.S. Pat. Appl. Publ. US 2004043020 A1 20040304, 16 pp., Cont.-in-part of U.S. Ser. No. 38,260. (English). CODEN: USXXCO. APPLICATION: US 2003-658491 20030908. PRIORITY: US 1999-143985P 19990715; US 2000-201268P 20000502; US 2000-616843 20000714; US 2002-38260 20020107.

AB A microbial adherence inhibitor specific to lactic acid producing microorganisms, in the form of fowl egg antibodies is disclosed, along with the method of making it and methods of using it. The inhibitor functions by substantially preventing the attachment or adherence of colony-forming immunogens in the rumen and intestinal tracts of host food animals. The inhibitor is made by inoculating female birds with the immunogen, allowing time for an immune response in the female bird and then harvesting the eggs that contain antibodies to the immunogen. The egg contents can be dried or used as a liquid and added to the feed or water for the host animals. Dependent upon the particular immunogen with which the female bird is inoculated, the egg antibody is used to promote the growth of food animals by improving feed conversion rates by decreasing the lactic acid production caused by the presence of certain colony-forming organisms in the animals, and to substantially reduce or eliminate the incidence of species that have been linked to very high production of lactic acid which can result in reduced performance and in acute situations, dangerously low rumen pH levels. When high levels of lactic acid are present in the rumen, rumen ulcers can form. When rumen ulcers are present other bacteria such as Fusobacterium necrophorum can escape the rumen and cause liver abscesses or laminitis, which further reduce feed conversion efficiency. Colony forming immunogens such as Streptococcus bovis (a major lactic acid producer) and Fusobacterium necrophorum can both be targeted by antibodies to enhance feed efficiency.

L12 ANSWER 7 OF 22 CAPLUS COPYRIGHT 2007 ACS on STN
2001:283232 Document No. 135:119509 Aggregation substance-mediated adherence of Enterococcus faecalis to immobilized extracellular matrix proteins. Rozdzinski, Eva; Marre, Reinhard; Susa, Milorad; Wirth, Reinhard; Muscholl-Silberhorn, Albrecht (Department of Medical Microbiology and Hygiene, University of Ulm, Ulm, D-89081, Germany). Microbial Pathogenesis, 30(4), 211-220 (English) 2001. CODEN: MIPAEV. ISSN: 0882-4010. Publisher: Academic Press.

AB Aggregation substance (AS) of Enterococcus faecalis (E. faecalis), a sex pheromone plasmid encoded cell surface protein, mediates the formation of bacterial aggregates, thereby promoting plasmid transfer. The influence of pAD1-encoded AS, Asa1, on binding to immobilized extracellular matrix proteins was studied. The presence of AS increased enterococcal adherence to fibronectin more than eight-fold, to thrombospondin more than four-fold, to vitronectin more than three-fold, and to collagen type I more than two-fold ($P<0.001$). In contrast, binding to laminin and collagen type IV occurred independently of AS. Adherence of the constitutively AS expressing E. faecalis OG1X(pAM721) to immobilized fibronectin was found to be approx. five times higher than that of Staphylococcus aureus Cowan and approx. 30 times higher than that of Streptococcus bovis. Investigation of strains with various deletions within the structural gene of asa1 suggests that attachment to immobilized fibronectin is mainly mediated by amino acids within the variable region or by neighboring residues. Thus, AS may promote adherence to injured epithelium and endothelium, where extracellular matrix proteins are exposed, thereby facilitating colonization and infection. (c) 2001 Academic Press.

L12 ANSWER 8 OF 22 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
2001:201331 Document No.: PREV200100201331. Streptococcus gallolyticus infections in racing pigeons, a review. Original Title: Streptococcus gallolyticus-infecties bij de postduif, een literatuuroverzicht. van der Toorn, F. [Reprint author]; Lumeij, J. T. [Reprint author]. Afdeling Vogels en Bijzondere Dieren, Hoofdafdeling Geneeskunde van Gezelschapsdieren, Faculteit der Diergeneeskunde, Universiteit Utrecht, Yalelaan 8, 3584 CM, Utrecht, Netherlands. Tijdschrift voor Diergeneeskunde, (1 Februari, 2001) Vol. 126, No. 3, pp. 66-71. print. CODEN: TIDIAY. ISSN: 0040-7453. Language: Netherlandish.

AB S. gallolyticus, formerly known as S. bovis is known since 1988 as a facultative pathogen of racing pigeons. Important clinical signs include acute mortality, inability to fly, lameness, weight loss and slimy green diarrhea. A pathognomic sign at post mortem examination is the presence of well circumscribed areas of necrosis in the pectoral muscle. Furthermore tenosynovitis of the supracoracoid muscle and arthritis of the knee, shoulder and hock can be observed. In one study S. gallolyticus septicaemia was diagnosed in 10% of necropsied pigeons. Since S. gallolyticus was also isolated from nearly 40% of clinical healthy pigeons it is regarded as a facultative pathogen. Various biotypes, serotypes and culture supernatant phenotypes can be distinguished. Supernatant phenotypes are identified on the basis of the presence of either a T1, T2 or T3 protein triplet and the presence or absence of an extracellular A protein. S. gallolyticus strains with A protein are highly virulent, while strains with only T3 or T2 protein are of moderately or low virulence respectively. Fimbriae are only seen in highly virulent and some of the moderately virulent strains. Possible virulence factors include survival in macrophages, adhesion to cells and toxin production. Infection with serotype 1 and 2 induces some degree of protection against re-infection with serotype 1, which offers perspectives for the development of a vaccine. Experimentally ampicillin, doxycyclin and erythromycin have shown therapeutic effects. For the treatment of clinical cases the use of ampicillin is advocated, together with hygienic measures, such as the use of grid floors and avoiding overcrowding.

L12 ANSWER 9 OF 22 MEDLINE on STN DUPLICATE 1
2000090678. PubMed ID: 10623439. Production of cytokines by monocytes, epithelial and endothelial cells activated by Streptococcus bovis. Ellmerich S; Djouder N; Scholler M; Klein J P. (Faculte de Pharmacie, INSERM U392, Illkirch, F-67400, France.) Cytokine, (2000 Jan) Vol. 12, No. 1, pp. 26-31. Journal code: 9005353. ISSN: 1043-4666. Pub. country: United States. Language: English.

AB There are numerous reports documenting the correlation between Streptococcus bovis bacteraemia and endocarditis in conjunction with colonic diseases. The adherence of S. bovis to either buccal or intestinal epithelial cells seems to be the initial process in colonization and subsequent infection of the host, allowing further adhesion of S. bovis to either endothelial cells or extracellular matrix components which leads to infective endocarditis. Bacterial entry at tumour sites is further assisted by the local action of cytokines that promotes vasodilatation and increased capillary permeability. Thus the ability of S. bovis to adhere to and to stimulate human cells may contribute to the pathogenicity of this bacteria. In the present study, we have shown the ability of S. bovis and wall-extracted antigens (WEA) to adhere to human buccal (KB) or intestinal (Caco-2) epithelial cell lines, to human saphenous vein endothelial cells, to human monocytic cell line (THP-1) and to extracellular matrix components (ECM) (fibronectin, collagen and laminin). The fixation of S. bovis on cells was followed by the synthesis of IL-8 from all the cells except Caco-2, whereas S. bovis WEA was able to induce cytokine synthesis from all of them, showing the immunomodulatory effect of S. bovis and S. bovis WEA on different cells. Copyright 2000 Academic Press.

L12 ANSWER 10 OF 22 CAPLUS COPYRIGHT 2007 ACS on STN

1999:783948 Document No. 132:9042 Receptor ligand antagonist complexes and their use in treating or preventing receptor-mediated diseases. Devico, Anthony L.; Lewis, George K.; Burns, Jennifer M.; Gallo, Robert (University of Maryland Biotechnology Institute, USA). PCT Int. Appl. WO 9962535 A2 19991209, 71 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1999-US12137 19990601. PRIORITY: US 1998-PV87436 19980601.

AB The invention provides therapeutic compns. of receptor ligand-containing antagonist complexes and methods of using them to treat diseases, disorders or conditions associated with the function or aberrant function of a cell surface receptor.

L12 ANSWER 11 OF 22 CAPLUS COPYRIGHT 2007 ACS on STN

1999:765138 Document No. 132:61395 Binding of selected extracellular matrix proteins to enterococci and Streptococcus bovis of animal origin. Styriak, Igor; Laukova, Andrea; Fallgren, Corina; Wadstrom, Torkel (Department of Microbiology, Institute of Animal Physiology, Slovak Academy of Sciences, Kosice, 040 01, Slovakia). Current Microbiology, 39(6), 327-335 (English) 1999. CODEN: CUMIDD. ISSN: 0343-8651. Publisher: Springer-Verlag New York Inc..

AB Thirty-three enterococcal strains and 10 Streptococcus bovis strains were investigated for their protein-binding cell surface components. Seven extracellular (ECM) proteins were immobilized on Difco latex beads to detect these components on the surface of all enterococcal strains and eight non-autoaggregating S. bovis strains by a particle agglutination assay (PAA). Twenty-three selected strains were also examined in microtiter plate assays. According to the absorbance readings (A570nm), 11 strains were classified as nonadherent (A570nm < 0.1), 10 strains as weakly adherent (0.1 < A570nm > 0.3), and 2 strains as strongly adherent (A570nm > 0.3) in these assays. A direct correlation was found between the values obtained in PAA and A570nm readings of microtiter plate assays. Binding of 125I-labeled bovine lactoferrin to enterococci and streptococci was in the range of 6%-30% and of 125I-labeled human vitronectin in the range of 9%-33% to streptococci. The binding of 125I-labeled ECM proteins to selected strains was much more effectively inhibited by sulfated carbohydrates than by non-sulfated hyaluronic acid, indicating the importance of the sulfate groups of these inhibitors. An inhibition effect of heparin on bLf binding to four selected strains was higher in comparison with fucoidan in the microtiter plates. Thirty-five out of 44 strains had agglutinated rabbit erythrocytes. However, these strains showed no ability to agglutinate bovine or sheep erythrocytes.

L12 ANSWER 12 OF 22 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

1998:473027 The Genuine Article (R) Number: ZU628. Attachment of different Escherichia coli strains to cultured rumen epithelial cells. Galfi P (Reprint); Neogrady S; Semjen G; Bardocz S; Pusztai A. Univ Vet Sci Budapest, Dept Phys & Biochem, POB 2, Budapest, Hungary (Reprint); Univ Vet Sci Budapest, Dept Phys & Biochem, Budapest, Hungary; Univ Vet Sci Budapest, Dept Pharmacol & Toxicol, H-1400 Budapest, Hungary; Rowett Res Inst, Aberdeen AB21 9SB, Scotland. VETERINARY MICROBIOLOGY (31 MAR 1998) Vol. 61, No. 3, pp. 191-197. ISSN: 0378-1135. Publisher: ELSEVIER SCIENCE BV, PO BOX 211, 1000 AE AMSTERDAM, NETHERLANDS. Language: English. *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*

AB The attachment to fully characterized primary rumen epithelial cell cultures of Escherichia coli strains isolated from different animal species and expressing F1-F4 or F17 fimbriae was examined. As the cell cultures contained stratified (keratinized) and non-stratified

(non-keratinized) cells which grew either confluently or non-confluently, the strength of attachment of the different bacterial strains was assessed in relation to the differentiation state of the cells. Thus, strains having F1 fimbriae attached to all types of cultured cells, while strains with F2 and F3 fimbriae did not bind at all. E. coli strains having F4 or F17 fimbrae attached only to non-keratinized cells, particularly to confluent areas. As membrane glycosylation is known to change with differentiation (keratinization), our results suggest that the attachment of fimbriated E. coli strains which were capable of binding to rumen cells was more likely to be dependent on differentiation than the host specificity of the bacteria. (C) 1998 Elsevier Science B.V.

L12 ANSWER 13 OF 22 MEDLINE on STN DUPLICATE 2
1998231083. PubMed ID: 9569625. Lack of surface receptors not restriction-modification system determines F4 phage resistance in Streptococcus bovis II/1. Styriak I; Pristas P; Javorsky P. (Institute of Animal Physiology, Slovak Academy of Sciences, Kosice, Slovakia.. styriak@linux1.saske.sk) . Folia microbiologica, (1998) Vol. 43, No. 1, pp. 35-8. Journal code: 0376757. ISSN: 0015-5632. Pub. country: Czech Republic. Language: English.
AB The resistance of Streptococcus bovis strain II/1, the producer of SbvI restriction endonuclease, to F4 phage infection was demonstrated by the double-agar-layer method. Despite the presence of restriction endonuclease SbvI which can cleave F4 phage DNA to numerous fragments in vitro, the evidence that adsorption inhibition is the most important defence mechanism in phage resistance of S. bovis II/1 strain was obtained by adhesion experiments in vivo. Electron microscopy of phage-host mixtures showed many phage particles on the bacterial surface of phage-sensitive S. bovis 47/3 control strain in comparison with no phage particles seen on S. bovis II/1 (phage-resistant) strain surface.

L12 ANSWER 14 OF 22 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
1997:276274 Document No.: PREV199799575477. Polysaccharide degradation in the rumen and large intestine. Forsberg, Cecil W. [Reprint author]; Cheng, K.-J.; White, Bryan A.. Dep. Microbiology, Univ. Guelph, Guelph, ON N1G 2W1, Canada. Mackie, R. I. [Editor]; White, B. A. [Editor]. (1997) pp. 319-379. Chapman and Hall Microbiology Series; Gastrointestinal microbiology, Vol. 1. Gastrointestinal ecosystems and fermentations. Publisher: Chapman and Hall, Inc., 29 West 35th Street, New York, New York, USA; Chapman and Hall Ltd., 2-6 Boundary Row, London SE1 8HN, England.
ISBN: 0-412-98361-3. Language: English.

L12 ANSWER 15 OF 22 EMBASE COPYRIGHT (c) 2007 Elsevier B.V. All rights reserved on STN
96090497 EMBASE Document No.: 1996090497. Highly expressed human sialyl Lewis antigen on cell surface of Streptococcus gallolyticus [4]. Hirota K.; Osawa R.; Nemoto K.; Ono T.; Miyake Y.. Department of Microbiology, University of Tohushima, School of Dentistry,Tokushima 770, Japan. Lancet Vol. 347, No. 9003, pp. 760 1996.
ISSN: 0140-6736. CODEN: LANCAO
Pub. Country: United Kingdom. Language: English.
Entered STN: 960408. Last Updated on STN: 960408
DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L12 ANSWER 16 OF 22 MEDLINE on STN
95373990. PubMed ID: 7646013. Cellodextrin efflux by the cellulolytic ruminal bacterium Fibrobacter succinogenes and its potential role in the growth of nonadherent bacteria. Wells J E; Russell J B; Shi Y; Weimer P J. (Section of Microbiology, Cornell University, Ithaca, New York 14853, USA.) Applied and environmental microbiology, (1995 May) Vol. 61, No. 5, pp. 1757-62. Journal code: 7605801. ISSN: 0099-2240. Pub. country: United States. Language: English.

AB When glucose or cellobiose was provided as an energy source for Fibrobacter succinogenes, there was a transient accumulation (as much as 0.4 mM hexose equivalent) of cellobiose or cellotriose, respectively, in the growth medium. Nongrowing cell suspensions converted cellobiose to cellotriose and longer-chain cellodextrins, and in this case the total cellodextrin concentration was as much as 20 mM (hexose equivalent). Because cell extracts of glucose- or cellobiose-grown cells cleaved cellobioise and cellotriose by phosphate-dependent reactions and glucose 1-phosphate was an end product, it appeared that cellodextrins were being produced by a reversible phosphorylase reaction. This conclusion was supported by the observation that the ratio of cellodextrins to cellodextrins with one greater hexose [n/(n + 1)] was approximately 4, a value similar to the equilibrium constant (Keq) of cellobiose phosphorylase (J. K. Alexander, J. Bacteriol. 81:903-910, 1961). When F. succinogenes was grown in a cellobiose-limited chemostat, cellobiose and cellotriose could both be detected, and the ratio of cellotriose to cellobiose was approximately 1 to 4. On the basis of these results, cellodextrin production is an equilibrium (mass action) function and not just an artifact of energy-rich cultural conditions. Cellodextrins could not be detected in low-dilution-rate, cellulose-limited continuous cultures, but these cultures had a large number of nonadherent cells. Because the nonadherent cells had a large reserve of polysaccharide and were observed at all stages of cell division, it appeared that they were utilizing cellodextrins as an energy source for growth.(ABSTRACT TRUNCATED AT 250 WORDS)

L12 ANSWER 17 OF 22 MEDLINE on STN DUPLICATE 3
95297915. PubMed ID: 7778984. The adherence of three Streptococcus bovis strains to cells of rumen epithelium primoculture under various conditions. Styriak I; Galfi P; Kmet V. (Department of Microbiology, Slovak Academy of Sciences, Kosice.) Archiv fur Tierernahrung, (1994) Vol. 46, No. 4, pp. 357-65. Journal code: 0217641. ISSN: 0003-942X. Pub. country: Switzerland. Language: English.

AB Three Streptococcus bovis strains were tested in biotype assay and examined for the adherence to cells of rumen epithelium primoculture. The adherence pattern of ruminal streptococci in phosphate buffered saline at pH values ranging from 4.1 to 8.5 was determined. Our isolates of Streptococcus bovis strains adhered best at pH 7.0-7.3. To characterize the adhesive determinants, the bacterial cells were exposed to various treatments. Protease treatment dramatically decreased the adherence of all Streptococcus bovis strains, thus suggesting that the determinants responsible for the adherence are largely proteinaceous. Carbohydrates could be also significantly involved in the active sites of bacterial surface because metaperiodate-treated cells adhered much more poorly than control, sodium iodate-treated cells. Addition of carbohydrates (lactose, maltose and saccharose) had no significant effect on the adherence of Streptococcus bovis strains although a slight decrease in the adhesion was detected.

L12 ANSWER 18 OF 22 MEDLINE on STN
93316307. PubMed ID: 8392108. Adherence of glucan-positive and glucan-negative strains of Streptococcus bovis to human epithelial cells. Von Hunolstein C; Ricci M L; Orefici G. (Laboratorio di Batteriologia e Micologia Medica, Istituto Superiore di Sanita, Rome, Italy.) Journal of medical microbiology, (1993 Jul) Vol. 39, No. 1, pp. 53-7. Journal code: 0224131. ISSN: 0022-2615. Pub. country: ENGLAND: United Kingdom. Language: English.

AB Adherence to buccal epithelial cells (BEC) and the role played in the binding by lipoteichoic acid (LTA) and other superficial components have been studied in reference and clinical strains of Streptococcus bovis either glucan-positive biotype I or glucan-negative biotype II. To avoid the synthesis of glucan by biotype I strains, adherence was studied in bacteria grown in Todd-Hewitt broth, a sucrose deficient medium. Both biotypes were shown to bind to BEC and clinical isolates,

irrespective of biotype attached to the same degree but in greater numbers than reference strains. Inhibition studies suggest that at least two mechanisms,--LTA and protein-mediated--are responsible for the adherence of both glucan-positive and negative strains of S. bovis. Moreover, in glucan-positive strains capsular polysaccharides may be also involved.

L12 ANSWER 19 OF 22 MEDLINE on STN DUPLICATE 4
94160690. PubMed ID: 1343946. Adherence of ruminal Streptococcus bovis and Lactobacillus strains to primary and secondary cultures of rumen epithelium. Styriak I; Galfi P; Kmet V. (Department of Microbiology, Slovak Academy of Sciences, Kosice.) Acta microbiologica Hungarica, (1992) Vol. 39, No. 3-4, pp. 323-5. Journal code: 8400270. ISSN: 0231-4622. Pub. country: Hungary. Language: English.
AB Six strains of rumen Lactobacillus and four Streptococcus bovis strains isolated from rumen wall and fluid samples were examined for the adherence to cells of primary and secondary cultures of ruminal epithelium (REC) prepared from sheep and calf. S. bovis adhered to the keratinized REC. Ruminal lactobacilli did not adhere. The presence of rumen lactobacilli in mixture had no influence on the adherence of S. bovis strains. No difference was observed in the adherence of tested bacteria to epithelial cells of primary or secondary cultures, but adhesion was only detected on keratinized cells.

L12 ANSWER 20 OF 22 MEDLINE on STN
92124684. PubMed ID: 1771751. Preliminary observations of interaction between bacteriophages and Streptococcus bovis bacteria on ruminal epithelium primoculture. Styriak I; Galfi P; Kmet V. (Department of Microbiology, Slovak Academy of Sciences, Kosice, Czechoslovakia.) Veterinary microbiology, (1991 Nov) Vol. 29, No. 3-4, pp. 281-7. Journal code: 7705469. ISSN: 0378-1135. Pub. country: Netherlands. Language: English.
AB Five Streptococcus bovis strains (47/3, 59/2, 4/1, 46/2 and 44/9) isolated from calf ruminal fluid samples were examined for the adherence to cultured ruminal epithelium cells. Four strains (47/3, 59/2, 4/1 and 46/2) were able to attach to the cultured epithelial cells. However, S. bovis 47/3 strain attached to the target cells in significantly greater numbers than the other strains. Strain 44/9 did not adhere to cells of ruminal epithelium. The adherent bacteria were observed on the surface of differentiated (mainly keratinized) cells of ruminal epithelium primoculture only. The different effect of F4, F5 and F6 bacteriophages was ascertained on S. bovis bacteria adhering to rumen epithelial primoculture. A significant decrease in the number of adherent bacteria was shown after cultivation of strains 47/3 and 4/1 with F6 bacteriophage and of 47/3 strain with F4 phage. The F5 bacteriophage had no significant effect on these bacteria.

L12 ANSWER 21 OF 22 MEDLINE on STN
90342255. PubMed ID: 1974372. Factors influencing the adherence of strains of Streptococcus bovis and Escherichia coli isolated from ruminal epithelium. Semjen G; Galfi P. (Department of Pharmacology, University of Veterinary Sciences, Budapest, Hungary.) Veterinary research communications, (1990) Vol. 14, No. 3, pp. 181-91. Journal code: 8100520. ISSN: 0165-7380. Pub. country: Netherlands. Language: English.
AB Two strains of Streptococcus bovis (A1 and A5) and one strain of Escherichia coli (0141:H28) isolated from the surface of bovine ruminal mucous epithelium were examined for adherence to isolated and cultured ruminal epithelial cells. The E. coli adhered to the target cell by means of fimbriae, which had several common properties with type 1 common fimbriae and caused mannose-sensitive haemagglutination. The A1 strain of S. bovis was devoid of fimbriae and its adherence to the epithelial surface was not inhibited by treatment with sugars or phenol-treated bacterial membrane from the same organism. It was therefore postulated that the bacterial glycocalyx of the S. bovis organisms acted as ligand. The extent of bacterial adherence depended on the state of differentiation of the target cell in both the isolated and

the cultured ruminal cell systems. The receptors for both adherent bacterial species were in all probability associated with the glycocalyx of the target cells.

L12 ANSWER 22 OF 22 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
1988:72214 Document No.: PREV198885038513; BA85:38513. ADHERENCE OF STREPTOCOCCUS-BOVIS TO ADULT BUCCAL EPITHELIAL CELLS.
VON HUNOLSTEIN C [Reprint author]; RICCI M L; SCENATI R; OREFICI G. LAB BATTERIOL MICOL MED, IST SUPERIORE DEI SANITA, VIALE REGINA ELENA 299, 00161 ROMA, ITALY. Microbiologica (Pavia), (1987) Vol. 10, No. 4, pp. 385-392.
ISSN: 1121-7138. Language: ENGLISH.
AB The ability of S. bovis 83/5364, glucan-positive (biotype I) and S. bovis R 81/536 glucan-negative (biotype II) to adhere to buccal epithelial cells (BEC) by lipoteichoic acid (LTA) was examined. LTA from both biotypes were prepared by cold phenol extraction from supernatants of penicillin supplemented cultures and partially purified by Sepharose CL-6B chromatography. Both glucan-positive and glucan-negative S. bovis strains adhered to BEC, but biotype I seemed to be more adhesive. For both biotypes the adhesion was not significantly inhibited by treatment of the bacteria with anti-LTA serum, while the preincubation of BEC with LTA, extracted from S. agalactiae, or cardiolipin strongly decreased the S. bovis binding.

=> s l9 and culture media
L13 98 L9 AND CULTURE MEDIA

=> s l13 and brain heart infusion
L14 2 L13 AND BRAIN HEART INFUSION

=> dup remove l14
PROCESSING COMPLETED FOR L14
L15 2 DUP REMOVE L14 (0 DUPLICATES REMOVED)

=> d l15 1-2 cbib abs

L15 ANSWER 1 OF 2 BIOSIS COPYRIGHT (c) 2007 The Thomson Corporation on STN
1978:122954 Document No.: PREV197865009954; BA65:9954. INFECTIVE ENDO CARDITIS CAUSED BY STREPTOCOCCUS-MUTANS. MCGHIE D [Reprint author]; HUTCHISON J G P; NYE F; BALL A P. REG PUBLIC HEALTH LAB, EAST BIRM HOSP, BORDESLEY GREEN E, BIRMINGHAM B9 5ST, ENGL, UK. British Heart Journal, (1977) Vol. 39, No. 4, pp. 456-458.
CODEN: BHJUAV. ISSN: 0007-0769. Language: ENGLISH.
AB Members of the viridans group of streptococci are the commonest causes of bacterial endocarditis. S. mutans, a member of this group associated with dental caries which might be expected to be commonly associated with endocarditis, has only rarely been reported. This is possibly because of difficulties in isolation and identification. Differing blood culture media may affect the chances of isolation of these organisms, and, though brain-heart infusion, thiol, tryptic soy and glucose-brain infusion broths were all satisfactory, subcultures may require increased CO2 concentrations for growth. Pleomorphism in the resultant colonies and in the individual organisms may give rise to a hazardous misinterpretation of this appearance as contamination. S. mutans and the similarly penicillin sensitive S. bovis may be differentiated from the penicillin resistant enterococci by their lincomycin sensitivity and intolerance of 6.3% NaCl. Precise differentiation of streptococci in bacterial endocarditis is of value both epidemiologically and in the management of the disease.

L15 ANSWER 2 OF 2 MEDLINE on STN
75207001. PubMed ID: 1170929. Isolation and identification of rumen bacteria capable of anaerobic phloroglucinol degradation. Tsai C G; Jones

G A. Canadian journal of microbiology, (1975 Jun) Vol. 21, No. 6, pp. 794-801. Journal code: 0372707. ISSN: 0008-4166. Pub. country: Canada. Language: English.

AB Eight strains of rumen bacteria capable of degrading phloroglucinol (1,3,5-trihydroxybenzene) under anaerobic conditions were isolated from enrichment cultures of the bovine rumen microflora established in a prereduced medium containing 0.02 M phloroglucinol. Five of the strains were facultatively anaerobic Gram-positive streptococci which were identified as Streptococcus bovis. Three strains of obligately anaerobic Gram-positive cocci were assigned to the genus Coprococcus. Anaerobic cultures of the Streptococcus bovis strains in a 40% rumen fluid medium initially containing 0.02 M phloroglucinol degraded 50-80% of the substrate within 2 days, whereas cultures of the Coprococcus strains degraded more than 80% of the substrate under the same conditions. The Streptococcus bovis strains were incapable of degrading phloroglucinol in brain heart infusion or in the medium of de Man, Rogosa, and Sharpe (MRS broth) incubated aerobically.

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=> s l9 and thioglycollate media
L16          0 L9 AND THIOGLYCOLLATE MEDIA

=> d his

     (FILE 'HOME' ENTERED AT 09:12:24 ON 26 MAR 2007)

     FILE 'MEDLINE, EMBASE, BIOSIS, SCISEARCH, CAPLUS' ENTERED AT 09:12:49 ON
     26 MAR 2007
L1         89365 S LACTOBACILLUS
L2           959 S L1 AND STIMULATE
L3            37 S L2 AND ADHESION
L4            21 DUP REMOVE L3 (16 DUPLICATES REMOVED)
L5          3351 S L1 AND CULTURE MEDIUM
L6            16 S L5 AND BRAIN HEART INFUSION
L7             0 S L6 AND THIOGLYCOLLATE MEDIA
L8            12 DUP REMOVE L6 (4 DUPLICATES REMOVED)
L9          4259 S STREPTOCOCCUS BOVIS
L10            0 S L9 AND STIMULATE ADHESION
L11           32 S L9 AND ADHESION
L12           22 DUP REMOVE L11 (10 DUPLICATES REMOVED)
L13           98 S L9 AND CULTURE MEDIA
L14            2 S L13 AND BRAIN HEART INFUSION
L15            2 DUP REMOVE L14 (0 DUPLICATES REMOVED)
L16            0 S L9 AND THIOGLYCOLLATE MEDIA

=> s l13 and thioglycollate
L17          0 L13 AND THIOGLYCOLLATE

=>

---Logging off of STN---


=>
Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS                        SINCE FILE      TOTAL
                                              ENTRY     SESSION
FULL ESTIMATED COST                          192.02      192.23
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